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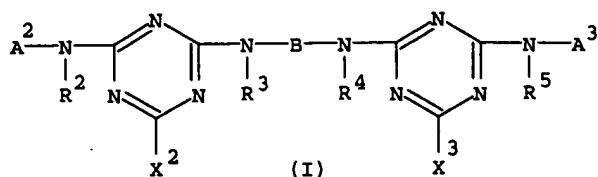
Fibre reactive dyes giving fast dyeing of cellulose fabrics - having two di-amino:triazine gps. linked by an aliphatic bridging gp. and carrying dye residues (Ger)

C96-136738 R(BE CH DE ES FR GB IT LI)

Addnl. Data: TZIKAS A

91.09.17 96EP-109923, Div ex 91.09.17 91EP-810734

Fibre reactive dyes of formula (I) are new.



A² and A³ = the residue of a monoazo-, polyazo-, metal complex azo-, anthraquinone-, phthalocyanine-, formazan-, azomethine-

, dioxazine-, phenazine-, stilbene-, triphenylmethane-, xanthene, thioxanthone-, nitroaryl-, naphthoquinone-, pyrenequinone- or perylene-tetracarbinide dye;
R²-R⁵ = H or 1-4C alkyl which may be substd. by halogen, OH, CN, 1-4C alkoxy, 1-4C alkoxy-carbonyl, carboxy, sulphamoyl, sulpho or sulphato;
B = an aliphatic bridging member; and
X² and X³ = F, Cl, Br, sulpho or carboxypyridinium gp.

USE

For dyeing and printing of cellulose-contg. fibre materials, esp. cotton, using the exhaustion process or the continuous dyeing process.

ADVANTAGE

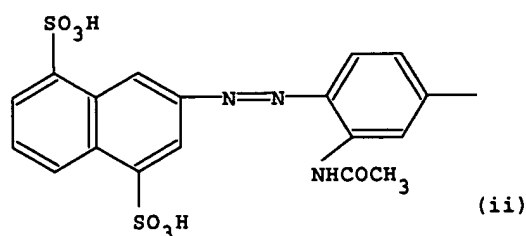
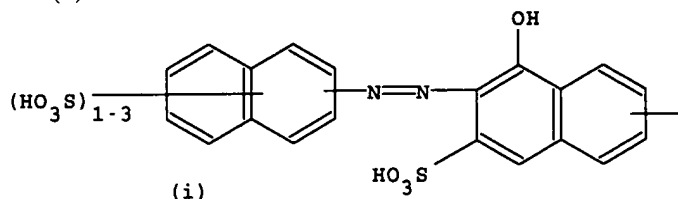
Gives dyeings with excellent wet fastness and light fastness.

PREFERRED DYESTUFFS

The linking gp. B is pref. -(CH₂)₂₋₆- or cyclohexylene which is opt. substd. by 1-4C alkyl. Twelve suitable residues of monoazo

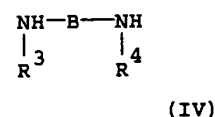
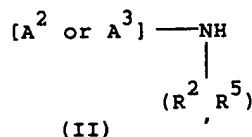
EP 735107-A+

chromophores for A² and A³ are claimed, including those of formula (i) and (ii).



PREPARATION

(I) are prepd. by reacting two equivs. of an organic dye of formula (II), or a dye precursor, at least one equiv. of an s-triazine (III) and at least one equiv. of a diamine or formula (IV), in any suitable order and, in the case where a dye precursor has been used, converting the intermediate prod. into the required dyestuff.

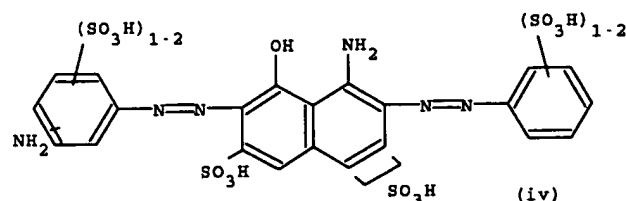
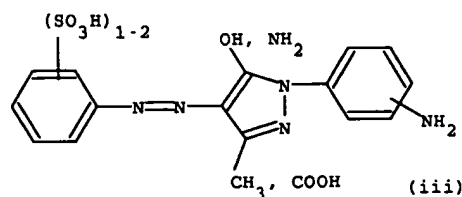


STARTING MATERIALS

25 dyes (VI) suitable as starting materials are disclosed including monoazo, diazo, metal complex and phthalocyanine types such as those of formula (iii) and (iv).

EP 735107-A+/1

96-435597/44



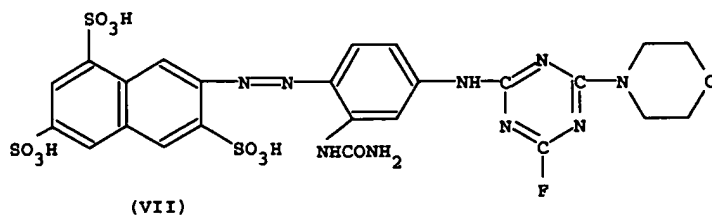
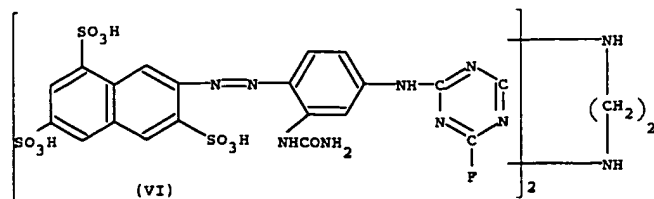
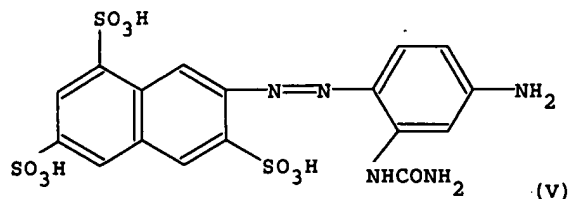
The s-triazine (III) is e.g. 2,4,6-trifluoro-s-triazine, 2,4,6-trichloro-s-triazine, 2,4,6-tribromo-s-triazine or 2,4,6-trisulpho-s-triazine. The diamine (IV) is e.g. 1,2-diaminoethane or 1,3-diaminopropane.

EXAMPLE

27.3 pts. of a dye of formula (V), was dissolved in 600 pts. vol. water and condensed with 7 pts. 2,4,6-trifluoro-s-triazine. When no

EP 735107-A+/2

further diazotisable amino gps. could be detected, an aq. soln. contg. 0.75 pts. ethylenediamine and 2.2. pts. morpholine was added at 0-5°C and pH 5-7. The pH of the mixt. was maintained at 7.5 by the addn. of Na₂CO₃ and the mixt. was warmed slowly to 25°C. After condensation was complete buffer salts were added and the dye mixt. was pptd. with NaCl, washed and dried. The prod. was an orange powder consisting of a mixt. of dyes of formula (VI) and (VII) and which dyed cotton in golden yellow shades. (HW)



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EP 735107-A/3